

REMARKS

Initially, Applicants would like to thank the Examiner for the telephone interview with their counsel on November 14, 2003. The interview was conducted to discuss all of the issues raised in the outstanding Office Action and earlier correspondence. Prior to the interview, Applicants sent to the Examiner a letter to facilitate discussion. A copy of this letter is attached hereto as Exhibit A, serving as a partial interview summary.

During the interview, the Examiner agreed to Applicants' proposed amendments to the variables Z and T recited in claims 23 and 46. See Exhibit A. Applicants have amended claims 23 and 46 accordingly. Support for the amendments can be found at page 7, lines 4-10 and page 9, line 8 to page 10, line 5 of the Specification, respectively. Further, during the interview, the Examiner proposed amending the recited groups "alkyl, alkenyl, alknyl, cyclyl, heterocyclyl, aryl, and heteroaryl" assigned to B" in claims 28, 29, 39, and 44. In the sole interest of placing this application in condition for allowance, Applicants have amended these four claims as proposed by the Examiner. Support for these amendments can be found in original claim 28. Applicants have also corrected a minor deficiency in the Specification. Claims 1-22, drawn to non-elected embodiments, have been canceled in the response to the office action dated April 9, 2003. No new matter has been introduced by the above amendments. **These amendments, either agreed to or proposed by the Examiner, should be entered as they raise no new issues that will require further consideration or search and also do not touch the merits of the application within the meaning of 37 C.F.R. § 1.116(b).**

Claims 23-54 are currently pending. The Examiner has concluded that claims 30, 35, and 51 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." See the Office Action, page 5, lines 10-12. On the other hand, the Examiner rejects all of the other claims on two grounds, i.e., under 35 U.S.C. § 112, 1st paragraph and 2nd paragraph. Applicants respectfully traverse each ground below.

Rejection under 35 U.S.C. § 112, 2nd paragraph

The Examiner rejects claims 23-27, 36-38, 40-43, 45-50, and 52-54 as being indefinite. Specifically, the Examiner points out that "nitrogen based tetradentate [or hexadentate] ligand

[recited in claims 23 and 46]" is unclear. See the Office Action, page 2, line 15. Applicants have limited the "nitrogen based tetradentate ligand" to one "in which four nitrogen atoms are bonded to four metal atoms" and limited the "nitrogen based hexadentate ligand" to one "in which six nitrogen atoms are bonded to six metal atoms." As mentioned above, the Examiner indicated, during the interview on November 14, 2003, that these amendments were acceptable.

The Examiner also rejects claims 28-29, 31-34, 39, and 44 as being indefinite on two grounds: (1) "[t]he term 'cyclyl' is not a standard term," and (2) "the first three terms [of B" recited in claims 28, 29, 39, and 44] are monovalent, but the variable [B"] is tetravalent." See the Office Action, page 4, line 17 to page 5, line 3.

During the interview, the Examiner proposed replacing the groups "alkyl, alkenyl, alknyl" assigned to B" with "a tetravalent hydrocarbon chain" and replacing the groups "cyclyl, heterocyclyl, aryl, and heteroaryl" assigned to B" with "a tetravalent saturated hydrocarbon ring, a tetravalent saturated heterocyclic ring, a tetravalent aromatic ring, or a tetravalent heteroaromatic ring," respectively. Applicants have amended claims 28, 29, 39, and 44 accordingly.

For the reasons and facts set forth above, Applicants request withdrawal of this rejection.

Rejection under 35 U.S.C. § 112, 1st paragraph

The Examiner rejects claims 23-29, 31-34, 36-50, and 52-54 as "containing subject matter which was not described in the specification in such a way as to enable one skilled in the art ... to make and/or use the invention." See the Office Action, page 3, lines 11-14. In particular, the Examiner points out that "[e]nablement cannot be seen for the scope of Z and T." See the Office Action, page 3, line 15.

During the interview, the Examiner asserted that the structure of a tetragonal complex has to be accurately determined by X-ray diffraction and that NMR may not be sufficient for this purpose. The Examiner then contended that if, for example, a tetragonal complex does not form a crystal, one cannot be sure whether the complex is encompassed by the formula recited in claim 23 as its structure cannot be accurately determined. Applicants disagree.

The Examiner correctly pointed out that X-ray diffraction is an accurate technique to determine the structure of an organometallic complex. However, it is well known in the art that

X-ray diffraction is not a routine analytical technique and that other analytical techniques (e.g., NMR, MS, IR, and elemental analysis) can also be used to accurately determine the structure of an organometallic complex. See Stang et al., J. Am. Chem. Soc. 1997, 119, 5163; Stang et al., Organometallic 1997, 16, 3094; Olenyuk et al., Nature, 1999, 398, 796; and Roche et al, Chem. Commun., 1998, 1681, a copy of which is attached hereto as Exhibits B, C, D, and E.

Note that all of these references disclose characterizing supramolecular complexes without using X-ray diffraction. For example, Exhibit B discloses characterizing tetrameric complexes using elemental analysis, IR, multinuclear NMR, and electrospray mass spectrum. See page 5164, right column, last paragraph. More importantly, Exhibit B points out that even though the authors were unable to obtain X-ray diffraction for some of the tetrameric complexes, they could determine the structures of these tetrameric complexes "by careful (multinuclear NMR, IR, etc) spectral comparison [to a structurally similar compound] and satisfactory elemental analyses." See note (39) on page 5165. Thus, one skilled in the art would know that the structure of a tetragonal complex can be accurately determined even if its X-ray diffraction data are not available.

For the reasons set forth above, it is submitted that Applicants have met the enablement requirement with respect to how to make and/or use the invention of claims 23-54.

CONCLUSION

Applicants submit that the grounds for rejection asserted by the Examiner have been overcome, and that claims 23-54, as pending, define subject matter that is definite and enabled. On this basis, it is submitted that all claims are now in condition for allowance, an action of which is requested.

Applicant : Kuang-Lieh Lu et al
Serial No. : 10/056,269
Filed : January 24, 2002
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Attorney's Docket No.: 08919-077001 / 13A-900603

Enclosed is a check for the Petition for Extension of Time fee. Please apply any other charges to deposit account 06-1050, referencing Attorney's Docket No. 08919-077001.

Respectfully submitted,

Date: _____

3-1-04



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